

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number  
**WO 2004/058209 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 7/42**

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(21) International Application Number:

PCT/GB2003/005658

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(22) International Filing Date:

23 December 2003 (23.12.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0230156.2	24 December 2002 (24.12.2002)	GB
0307545.4	1 April 2003 (01.04.2003)	GB
0308720.2	15 April 2003 (15.04.2003)	GB
0315082.8	27 June 2003 (27.06.2003)	GB

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

— with international search report

(88) Date of publication of the international search report:

28 October 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **SUNSCREENS**

(57) Abstract: A UV suncreening composition suitable for cosmetic or topical pharmaceutical use which comprises an amount of one or more organic components which are photosensitive and/or which are degraded and/or in which degradation is induced by another ingredient of the composition, and an amount of TiO<sub>2</sub> and/or ZnO which has been doped with another element and/or reduced zinc oxide, this composition having a rate of loss of UV absorption at least 5% less than that of a composition having the same formulation except that it does not contain the said TiO<sub>2</sub> and/or ZnO which has been doped with another element or the said reduced zinc oxide.

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 03/05658

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A61K7/42

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61K C01G C09C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, CHEM ABS Data, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/40114 A (ISIS INNOVATION (GB)); 7 June 2001 (2001-06-07) cited in the application	1-9, 11-31
Y	page 3, line 7 - page 4, line 19; claims 1-20; examples 4-6 page 6, line 5 - page 7, line 25	10
X	EP 0 526 712 A (SHISEIDO CO LTD) 10 February 1993 (1993-02-10) page 29, line 41 - line 55; example 3 page 2, line 25 - page 4, line 7 page 5, line 9 - line 22 page 27, line 6 - line 20	1-9, 11, 14-26

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

**\* Special categories of cited documents:**

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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

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\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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\* & \* document member of the same patent family

Date of the actual completion of the international search

9 June 2004

Date of mailing of the international search report

05.08.2004

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International Application No  
PCT/GB 03/05658

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 09, 13 October 2000 (2000-10-13) & JP 2000 169339 A (POLA CHEM IND INC), 20 June 2000 (2000-06-20) abstract	1,2,8, 11, 17-19, 23,26
X	US 5 441 726 A (MITCHNICK MARK ET AL) 15 August 1995 (1995-08-15) column 7, line 29 - line 50 column 9, line 39 -column 12, line 51	1-7, 11-26
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Y	WO 99/60994 A (ISIS INNOVATION (GB)) 2 December 1999 (1999-12-02) cited in the application page 3, line 4 - line 28 page 4, line 30 -page 5, line 20 page 7, line 2 -page 8, line 22; examples 1,2	10
X	DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; ONO, KAZUHISA ET AL: "Fluorescent cosmetics" retrieved from STN Database accession no. 116:180935 XP002283890 abstract & PATENT ABSTRACTS OF JAPAN vol. 016, no. 110 (C-0920), 18 March 1992 (1992-03-18) & JP 03 284613 A (SHISEIDO), 16 December 1991 (1991-12-16) abstract	1-3,10, 11,21, 23,26

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# INTERNATIONAL SEARCH REPORT

International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE WPI Section Ch, Week 199205 Derwent Publications Ltd., London, GB; Class L03, AN 1992-035278 XP002283891 &amp; JP 03 279214 A (LION CORP), 10 December 1991 (1991-12-10) abstract</p>	1,9
A	<p>EP 0 768 277 A (NIPPON CATALYTIC CHEM IND) 16 April 1997 (1997-04-16) page 2, line 12 - line 30; claims 1-9,27-36,99,105 page 5, line 36 -page 6, line 8 page 15, line 30 - line 42 page 46, line 30 -page 47, line 21</p>	1-3, 10-26
A	<p>EP 1 112 964 A (SAKAI CHEMICAL INDUSTRY CO) 4 July 2001 (2001-07-04) page 2, line 43 -page 3, line 55; claims</p>	1-31

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 03/05658

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-2(partially),3-9,11-31(partially)

A UV sunscreensing composition comprising one or more photosensitive organic compounds and a doped titanium and/or zinc oxide. The use of said doped metal oxides to reduce the loss in UV absorption of a sunscreen composition is also disclosed.

2. Claims: 1-2(partially),10,11-31(partially)

A UV sunscreensing composition comprising one or more photosensitive organic compounds and a reduced zinc oxide. The use of said reduced metal oxides to reduce the loss in UV absorption of a sunscreen composition is also disclosed.

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International Application No  
PCT/GB 03/05658

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